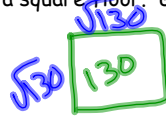**Algebra 1-6: Square Roots & Radicals   Day II**

Warm-Up $\sqrt{130}\sqrt{130} = 130$

1. It took 130 square yards of carpet to cover a square floor. Give the length of the room…

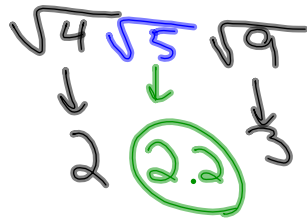   a) As an exact answer. $\underline{\sqrt{130}}$

    $\sqrt{130}$ | 130 | $\sqrt{130}$

    $\sqrt{130}$

    11.40

    b) As an approximated answer to the nearest hundredth.

$\sqrt{130} = 11.4017$

2. Evaluate $\sqrt{(7^2 + 5^2)}$ $\underline{\sqrt{74}} \approx 8.60$

$\sqrt{7^2 + 5^2} = \sqrt{49 + 25} = \sqrt{74}$

3. Estimate $\sqrt{5}$ without a calculator. $\underline{2.2}$

$\sqrt{4} \quad \sqrt{5} \quad \sqrt{9}$
$\downarrow \qquad \downarrow \qquad \downarrow$
$2 \quad (2.2) \quad 3$

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4. Multiply without using a calculator.

    a) $\sqrt{15}\cdot\sqrt{15}$ $\underline{15}$

    $\begin{array}{r} 20 \\ \times 11 \\ \hline 20 \\ 200 \\ \hline 220 \end{array}$

    b) $4\sqrt{11}\cdot 5\sqrt{11}$ $\underline{220}$

$20\sqrt{11}\sqrt{11} = 20\cdot 11$

    c) $\sqrt{25}\cdot\sqrt{4}$ $\underline{10}$

$5\cdot 2 = 10$

5. Solve $\sqrt{x^2} = 52$.

$\boxed{X = \pm\sqrt{52}}$

1. Give exact solution(s). $\underline{X = \pm\sqrt{52}}$

2. Give the solution(s) rounded to the nearest hundredth. $\underline{7.21}$